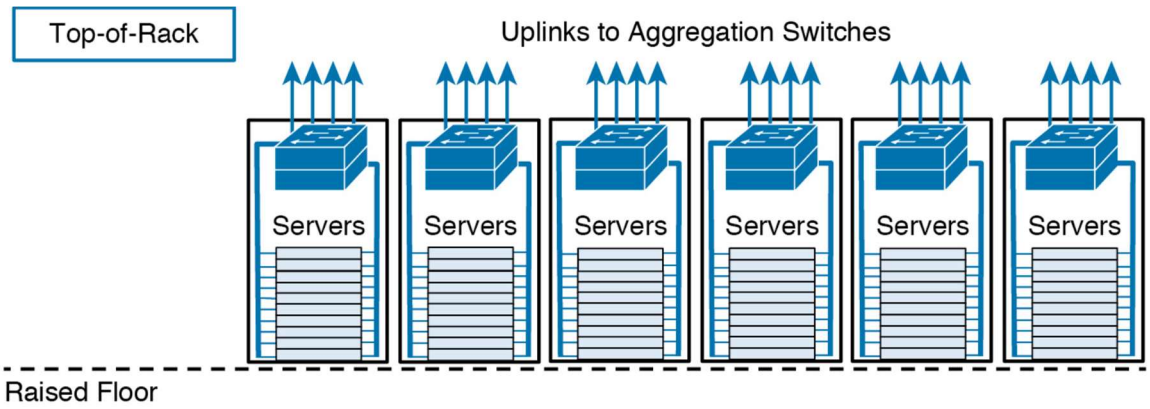
- **What is Tor?**
  - The name itself suggest the placement of network access switch. Means it is placed on the top of Rack.
  - In this the server is also in the same rack and directly connected to the switch.
  - Then after that all the switch is connected to aggregation switch.

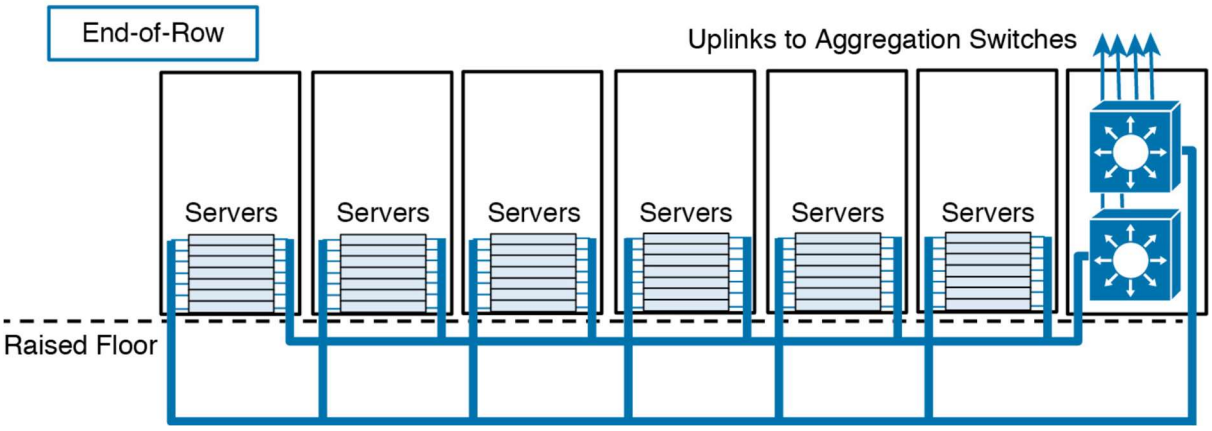
- **Benefits of Tor:-**
  - The main benefits of the Top-of-Rack approach is that the cable cost is too much less. As it is connected to the switch in the same rack.
  - The cable management is easy and cable technician can easily change the cable if there is fault.
- **Limitations of Tor:-**
  - For ToR, although the cables are reduced, the number of racks is still increased. The management of switches may be a little tricky. ToR approach takes up more rack space for the installation of switches.



- **What is Eor?**
  - The name itself suggest the placement of network access switch. Means it is placed on the End of Row.

- In this the server and switch both are in different rack.
- By this there is better port utilization.

- **Benefits of Eor:-**
  - In this there is less device because not every rack is equip with switch
  - Less rack space is required.



- **Limitations of Eor:-**
  - Its Layer 2 traffic efficiency is lower than the ToR. Because when two servers in the same rack and VLAN (virtual local area network) need to talk to each other, the traffic will go to the aggregation switch first before comes back. As less switches are used in EoR design, more cables are deployed between racks triggering higher possibility of cable mess. Skillful technicians are required when carrying out the cable management.
  - More cable is required. It is difficult for cable technician.
  - If some cable is damaged then it is difficult to change it.

➢ **Conclusion:**

- Hence , ToR and EoR are the common designs for data center architecture. Choosing the proper one for your network can promote the data center efficiency.
- In large data center like google,Microsoft they mainly don't use EoR they prefer ToR.

Top-of-Rack	End-of-Row
In this the switch is placed on top of rack	In this the switch is placed in end of row
Server and switch is placed on same rack	Server and switch is placed in different switch
There is less cable required	The cable requirement is more
If there is need to change the cable it is easy	If there is need to change the cable then it is difficult
Cable Management is easy	Cable management is difficult
3-Tier Design	2-Tier Design
It is less complicated	It is more complicted
Port Usage is more	Port usage is less